



# Year 12 Curriculum Grid



## A LEVEL PE

Year/Term	Unit	Intent
Overall	<b>Applied anatomy and physiology</b>	<p>Students should develop knowledge and understanding of the changes within the body systems prior to exercise, during exercise of differing intensities and during recovery.</p> <p>Students should be able to interpret data and graphs relating to changes within the musculo-skeletal, cardio-respiratory and neuro-muscular systems and the use of energy systems during different types of physical activity and sport, and the recovery process.</p>
Autumn 1	Cardiovascular system	<p>Students should understand the relationship between the cardiovascular and respiratory systems and how changes within these systems prior to exercise, during exercise of differing intensities and during recovery allow the body to meet the demands of exercise. They should also understand how taking part in physical activity and sport, as part of a healthy lifestyle, can have a positive effect on these systems.</p> <ul style="list-style-type: none"> <li>• Understanding of the impact of physical activity and sport on the health and fitness of the individual.</li> <li>• The hormonal, neural and chemical regulation of responses during physical activity and sport.</li> <li>• Receptors involved in regulation of responses during physical activity.</li> <li>• Transportation of oxygen.</li> <li>• Venous return.</li> <li>• Starling's law of the heart.</li> <li>• Cardiovascular drift.</li> <li>• Arterio-venous oxygen difference (A-VO<sub>2</sub> diff).</li> </ul>
Autumn 2	Respiratory system	<p>Students should understand the relationship between the nervous and muscular systems and how changes within these systems prior to exercise, during exercise of differing intensities and during recovery allow the body to meet the demands of exercise.</p> <ul style="list-style-type: none"> <li>• Understanding of lung volumes and the impact of and on physical activity and sport.</li> <li>• Gas exchange systems at alveoli and muscles.</li> <li>• The neural and chemical regulation of pulmonary ventilation during physical activity and sport.</li> <li>• Receptors involved in regulation of pulmonary ventilation during physical activity.</li> <li>• Impact of poor lifestyle choices on the respiratory system.</li> </ul>
Spring	Neuromuscular system	<ul style="list-style-type: none"> <li>• Characteristics and functions of different muscle fibre types for a variety of sporting activities.</li> <li>• Nervous system.</li> <li>• Role of proprioceptors in PNF.</li> </ul>



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		<ul style="list-style-type: none"> <li>The recruitment of muscle fibres.</li> </ul>
	The musculo-skeletal system and analysis of movement in physical activities	<p>Students should understand the relationship between the muscular and skeletal systems to meet the demands of exercise. Students should be able to apply their knowledge and understanding to specific sporting actions and movement in a range of physical activities.</p> <ul style="list-style-type: none"> <li>Joint actions in the sagittal plane/transverse axis.</li> <li>Joint actions in the frontal plane/sagittal axis.</li> <li>Joint actions in the transverse plane/longitudinal axis.</li> <li>Types of joint, articulating bones, main agonists and antagonists, types of muscle contraction.</li> </ul>
Summer	Energy systems	<p>Students should develop knowledge and understanding of energy systems prior to exercise, during exercise of differing intensities and during recovery.</p> <ul style="list-style-type: none"> <li>Energy transfer in the body.</li> <li>Energy continuum of physical activity.</li> <li>Energy transfer during short duration/high intensity exercise.</li> <li>Energy transfer during long duration/lower intensity exercise.</li> <li>Factors affecting VO<sub>2</sub> max/aerobic power.</li> <li>Measurements of energy expenditure.</li> <li>Impact of specialist training methods on energy systems.</li> </ul>